



User Capacity: Art or Science?

Presented by

Melanie Beck, Outdoor Recreation Planner
(805) 370-2346 melanie_beck@nps.gov

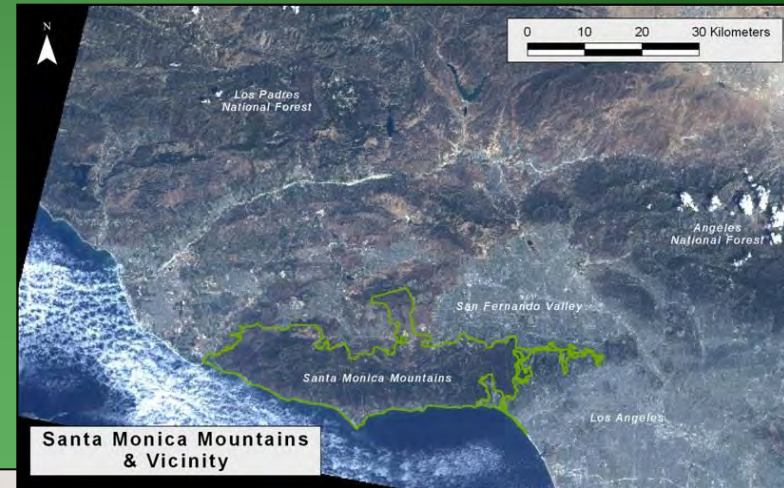
April 10, 2014





Santa Monica Mountains National Recreation Area

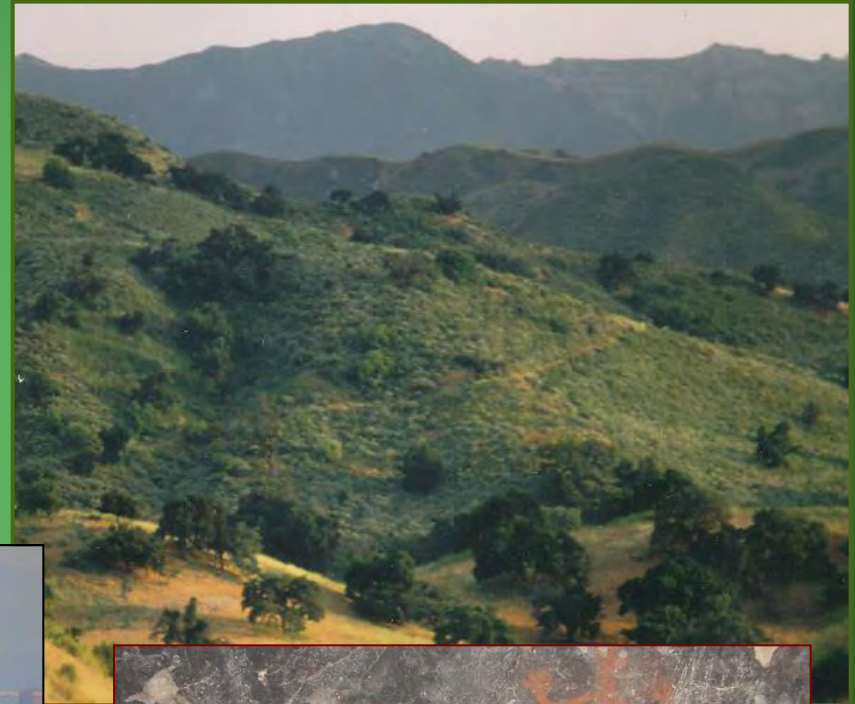
- A unit of the National Park System; established in 1978
- Covers approximately 153,250 acres from Griffith Park to the Oxnard Plain
- Land ownership mixture of 55% protected parkland and 45% private lands
- Includes 5 State Parks





Tremendous Natural & Cultural Resources, Threatened

- An area of global biodiversity concern
 - [33 T&E species
 - [50 Candidate or Species of Concern
 - [100 Park Species of Concern
- Over 1,000 documented archaeological sites
- Heavy use: Trail network is within an hour's drive of 1 in every 17 Americans.





Numerous Recreational Opportunities: The SMMNRA Trail Network

Nearly 500 miles in public network

Trails 286 mi.

Roads (Unpaved/Paved) 198 mi.

Most common uses: hiking, horseback riding, and mountain biking.

Trail Use Designation		Visitor Survey User Activities (July 2002, Western Area)	
Multiple Use	60%	35%	Mountain Biking
Hiker/Equestrian	20%	5%	Horseback Riding
Hiker-Only	20%	60%	On-Foot: Hiking, Jogging, Dog-walking, etc.



SMMNRA Interagency Trail Management Plan EIS/EIR Underway

Recreational Routes

Status

Use Designation

Regional Trail Systems

Keep, Realign, Reengineer, Construct New, Close

Evaluate and Assign Use Designation, Consider Alternative Management Strategies, Provide Adequate ADA Opportunities

6 Systems: Identify Alignments, Evaluate Feasibility

Recreational Facilities

Backbone Trail Backcountry Camps

Trailheads

Trail Signage

Possible Actions

Backcountry Camps: Construct and Operate on Permit System

Improve Access, Upgrade Facilities at Existing Trailheads along Backbone Trail and Other Locations

Implement Joint Agency Trail Rules Signage
Strive for Uniform Appearance (Design, Materials)

Estimated Completion of TMP EIS/EIR: Mid- to Late 2015



Trail User Capacity Management at SMMNRA: The Science

Indicators

Natural Science

Mountain Lion Tracking

- 65% of all GPS locations were greater than 1000m from urban areas.
- 23% of study area was within 100m of a trail.
- 18% of all GPS locations were within 100m of a trail.
- 16% of kills were located within 100m of a recreational trail.
- Only 2% of these kills were located less than 10m from a trail.

Mountain lions and other wildlife use trails, with documentation of use at night. How manage user capacity to support nocturnal, as well as diurnal, wildlife activities?





Trail User Capacity Management at SMMNRA: The Science

Indicators

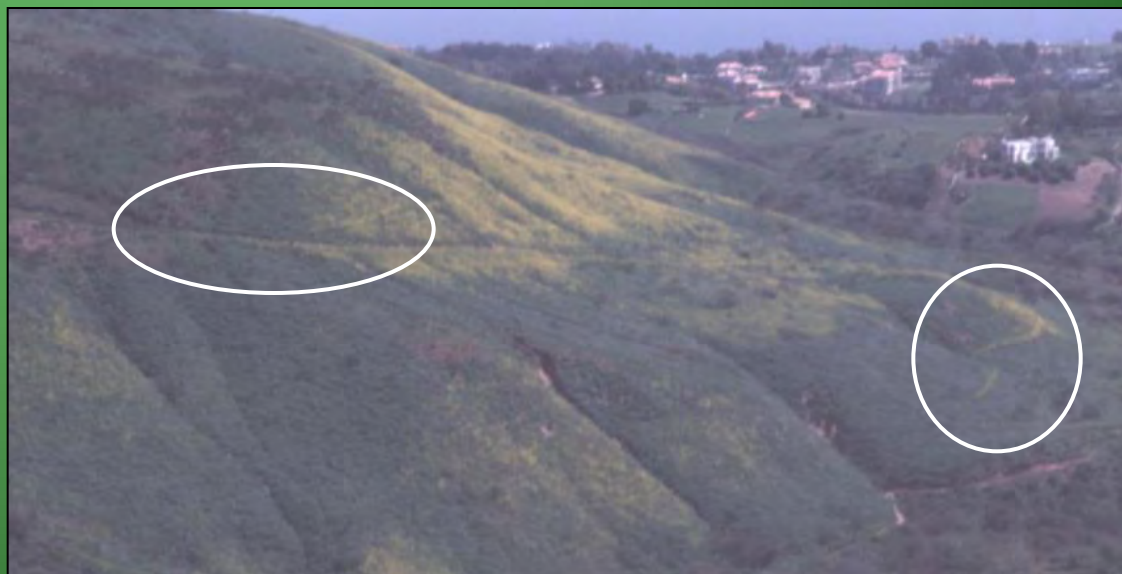
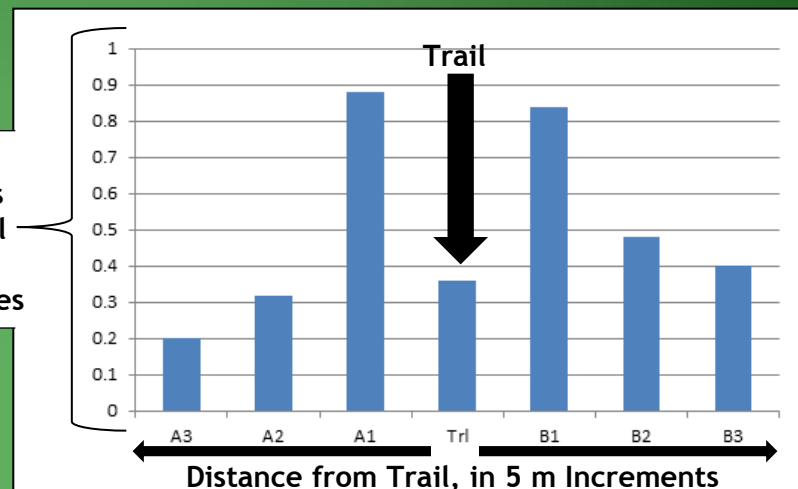
Natural Science

Vegetation

- Non-native invasive plant presence is greatest near trailheads and diminishes with distance from trails and trailheads. (NPS 2013, in review)
- Coastal sage scrub habitat is most vulnerable to trail-use related non-native species invasion, with multiple use trails having a greater impact than hiking-only trails. Chamise chaparral habitat is most resistant to impacts.
- (Eric Esby, Master's Thesis, 2014)

Invasives are common along trails and trails can diminish habitat quality. How manage trails and trail use to reduce continued spread?

Percent of the number of points visited along trail that had target non-native species





Trail User Capacity Management at SMMNRA: The Science

Indicators

Social Science

Trail Use Patterns

Morning	64%
Afternoon	35%
Evening	21%

Weekends	73%
Weekdays	26%

Summer	72%
Fall	56%
Winter	52%
Spring	63%

Median Hours Spent on Trail	2
-----------------------------	---

Median Visits per Month	4
-------------------------	---

Visitors drove an average of 27-34 minutes to reach trails.

2002 Recreational Visitor Survey

- Data collected at 33 trailheads over two weekends and two intervening weekdays in July
- Survey instrument (1,200) covered demographics, travel "shed", visitation patterns, user types, user attitudes toward SMMNRA and toward other users.
- Visitor count (12,388) to tally total visitation broken down by user types
- Survey is likely outdated for demographics, user types, and total visitation.

Why Protect SMMNRA?

- 53%: To provide habitat for plants & animals
- 22%: To provide recreational opportunities
- 22%: Both habitat and recreation

User Attitudes toward Others

Approximately 30% of users had "no problem" with other users, and for the most part, users viewed other users favorably or were neutral. 70% of users, however, cited the following problems.

- 28.1%: uncooperative behavior
- 24.9%: leaving animal wastes
- 22.2%: littering
- 20.5%: collisions or injury
- 20.5%: startling people
- 19.6%: damaging plants
- 17.7%: frightening wildlife
- 14.9%: making too much noise
- 6.3%: scaring horses

Recreational Activity

Geographic Area:	Western	Eastern
Activity	%	%
Hiking	29.8	65.9
Mountain Biking	34.6	4.6
Jogging	11.7	8.4
Sightseeing	6.8	3.8
Dog walking	1.9	10.0
Horseback riding	5.2	1.5
Picnicking	2.6	1.5
Other	7.4	4.3




Trail User Capacity Management at SMMNRA: The Art

Indicators

The Art: Field Observations, Experience, Professional Knowledge, and Judgment.

Internet Recommendations And Increased Search and Rescue Events



Escondido Canyon, 102 Visitors Counted on 1-mile Road to Trailhead, Parking Lot for 14 Cars Max. Remainder Parking along Pacific Coast Hwy

Field observations indicate tremendous increase in visitation, particularly Saturday and Sunday mornings throughout SMMNRA parks.

Also worth noting:


Visitor Conflicts - Perceived and/or Documented

Social Networking Explosion



China Flat, Simi Hills Pakland, Meetup Group Using Unauthorized Trail

Destination Visitation



Parker Mesa Overlook
Topanga State Park
One bench for 50+ Visitors



Trail User Capacity Management at SMMNRA: The Art

Indicators

Field observations of parking indicate underused “Fee” parking lots and overused “Free” parking lots. Parking along roads has led to more car break-ins, triggering of car alarms, and dangerous walking on very busy roadways.

Parking “Outside” to Avoid Entrance Fees



Mulholland Highway west of Las Virgenes Road, Malibu Creek State Park, Saturday Morning, April 2014

Underused Fee Parking Lots (and Overwhelmed Free Parking Lots)



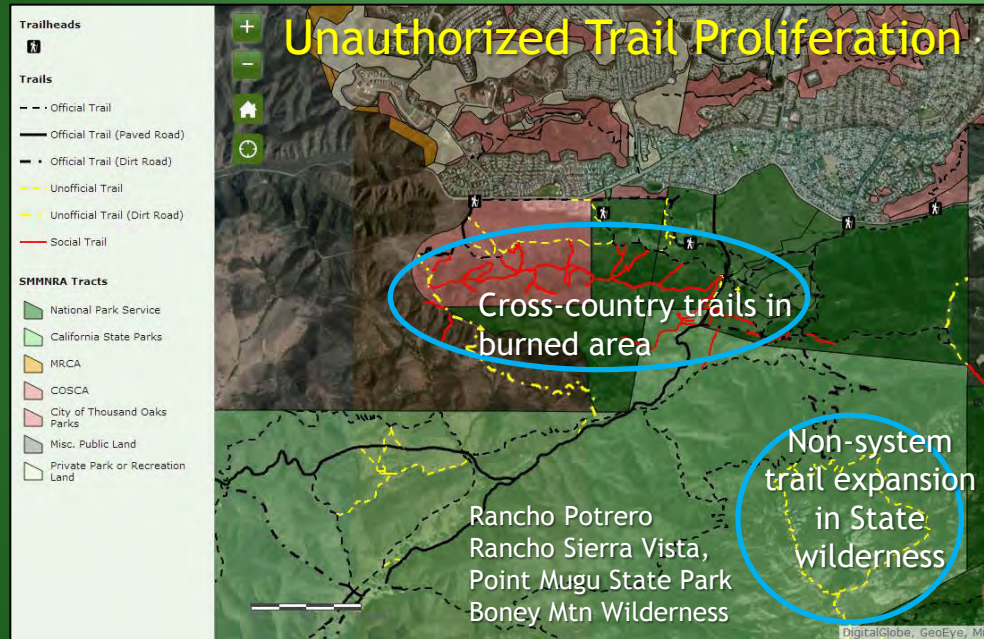
Malibu Creek State Park Main Entrance, Saturday Morning, April 2014



Trail User Capacity Management at SMMNRA: The Art

Indicators

Field observations of resource damage from trails and trail use.





Trail User Capacity Management

How Manage Trails Based on Available Science and Artful Observations?

General Management

- Prepare a Plan - Trail Management Plan, General Management Plan.
- Prepare or update trail use surveys/visitor counts.

Natural Resource Management Strategies

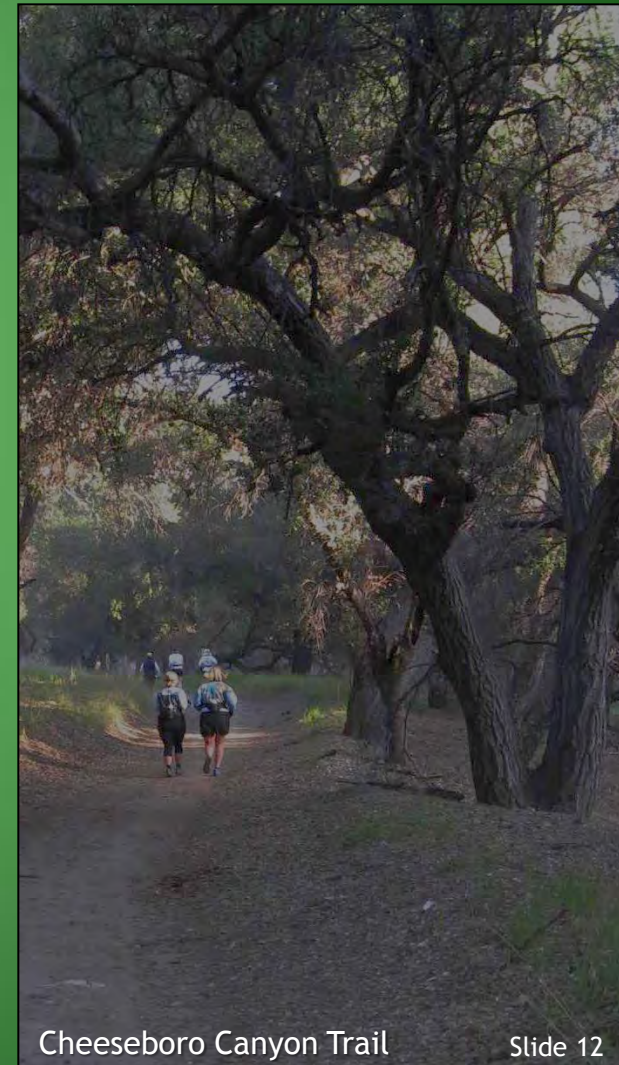
- Assign time and seasonal use limitations and/or closures.
- Avoid or reduce new trail construction, particularly in CSS.

Natural and Social Management Strategies

- Participate in Internet Social Media, Blogs, etc.
- Compare trail density with similar regions.
- Establish use by reservation or permit only.
- Provide clear trail directional signage.
- Provide sustainable and inviting trailheads.

Social Management Strategies

- Establish alternate use trail designation strategies.
- Reduce or eliminate entrance fees.
- Install “No Parking” and “No Parking After Hours” Signs on Roadways.
- Provide well-delineated trails to destinations or features.
- Increase ranger presence and volunteer patrol programs
- Educate, educate, educate...



Cheeseboro Canyon Trail



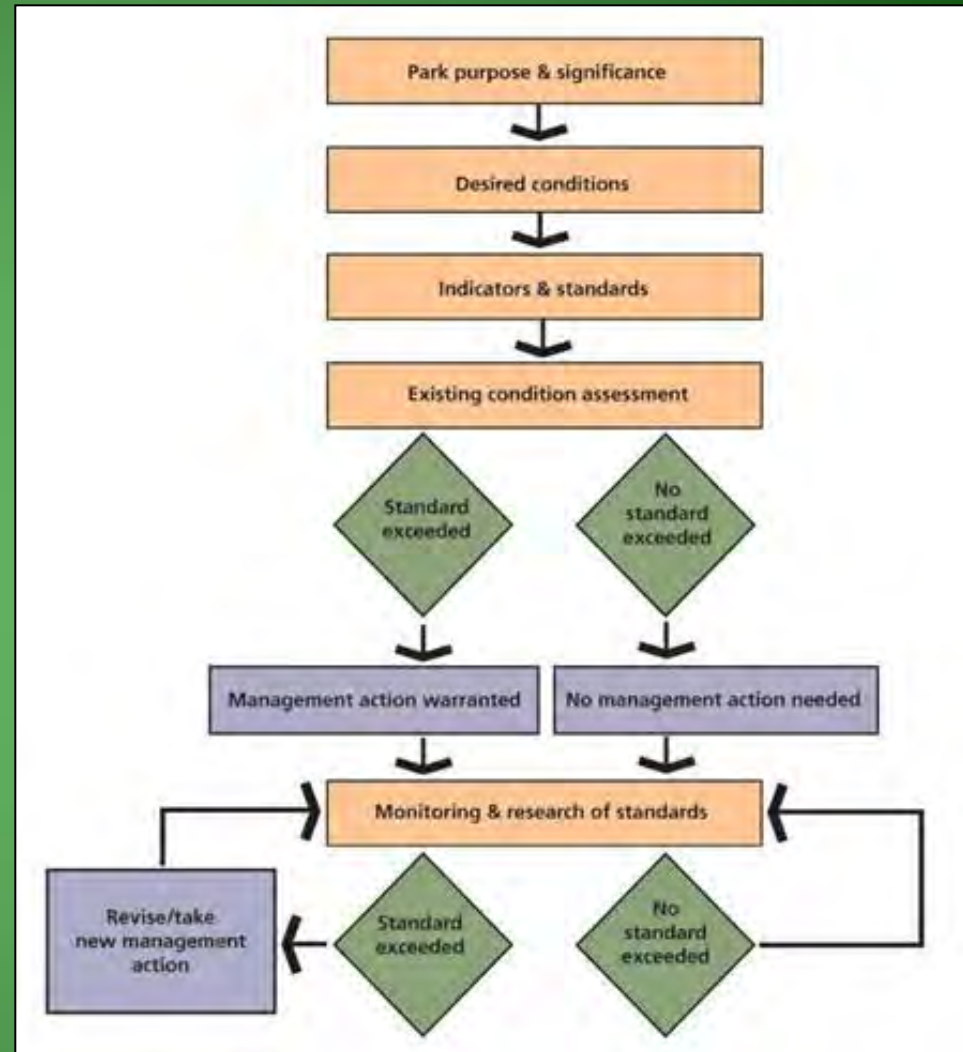
Trail User Capacity Management

General Management

- Prepare a Plan - Trail Management Plan, General Management Plan.
- Prepare or update trail use surveys and visitor counts.



Rancho Sierra Vista, 2002 Recreational Visitor Survey



User Capacity Framework
City of Rocks National Reserve, Draft GMP EIS



Trail User Capacity Management “Toolbox”

Natural Resource Management Tools - Examples

- Assign time and seasonal use limitations and/or closures.

Example User Capacity Issue: Growing nighttime recreation may have escalating aesthetic impacts and potential impacts on nocturnal amphibians and other wildlife.

Management:

- Restrict areas open for nighttime recreation.
- Restrict use to 10 days surrounding full moon.
- Set curfews for illuminated nighttime recreation.
- Restrict luminous intensity of lights.

Source: NPS Night Skies Program and Travis Longcore, UCLA



Red-legged Frog Reintroduction

- Avoid or reduce new trail construction, particularly in CSS.

Example User Capacity Issue: Do we build the long-envisioned Coastal Slope Trail through ~3 mi. of coastal sage scrub habitat?

Management:

Consider preferences for new one-way long-distance trails or loop opportunities, preferably all avoiding CSS (per science).





Trail User Capacity Management “Toolbox”

Natural Resource and Visitor Management

- Monitor and Participate in Internet Social Media, Blogs, etc.

Example User Capacity Issue:
Recreation destinations go “viral” on internet and lead to over-capacity parking needs, false sense of safety, and observable resource damage.

Management:

- Provide agency-based reviews
- Notify webmasters of erroneous information.
- Respond in field with enforcement and education.
- Provide clear trail directional signage.



- Initiate use by reservation or permit.

★★★★☆ 3/28/2014

1 check-in here

Had quite an enjoyable hike here. On our way to the waterfall, we asked some returning hikers how much farther it was and were informed we were past the halfway point, and that the hike was fairly easy. We were therefore very confused when our hike became increasingly vertical, and very soon we were most definitely rock-climbing more than hiking. After a while, we realized we had taken a wrong turn after passing some no-trespassing signs/fences and seeing the waterfall dozens of meters below us. There were a couple of close scrapes - the rocks would come loose sometimes, or the dirt would just slide away, but it made for quite a fun hike.

The view wasn't bad; the waterfall is more of a trickle than anything, but that could probably be due to the drought. As other Yelpers have mentioned, using GPS will take you to a random residential neighborhood - park instead at the road labelled "Winding Way".



Escondido Canyon Search and Rescue Event



Trail User Capacity Management “Toolbox”

Natural Resource and Visitor Management

- Provide sustainably designed trailheads with amenities necessary to support resource protection and provide for visitor comfort.

Example User Capacity Issue: Trailhead use, instead of advance planning, dictates parking capacity, circulation patterns, to the detriment of resources and the visitor experience.

Management: Trailhead “Toolkit”

Assign levels of facilities according to location and available funding resources. Suggestions:

Expansion	All of “Moderate” and “Basic” facilities, plus expanded parking area, flush toilet, potable water.
Moderate	All of “Basic” facilities, plus information kiosk and vault toilet, fence delineating parking.
Basic	Sustainable surfacing and drainage, trash receptables, trailhead entrance sign and trail directional signage, gate, public street parking control signs (“No Parking”, etc.).





Trail User Capacity Management “Toolbox”

Visitor Management Tools - Examples

- Establish alternate use trail designation strategies.

Example User Capacity Issue: Demand continues for shared and non-shared trails continues. How accommodate the increasing numbers of, particularly, hikers and mountain bikers and the ongoing issue of user conflicts?

Management:

- Assign timeframes for shared use or non-shared use.
- Assign shared use single-direction route.
- Use State Parks' Trail Use Designation Change PEIR for use designation evaluation

Examples

- Tahoe Rim Trail, Tahoe Meadows to Spooner Summit (9 miles): Mountain biking on even-numbered days.
- Tsali Recreation Area, North Carolina: 40 miles, alternating days of shared use.
- Golden, CO, Centennial Cone Park: 12 miles, weekend alternating days, shared use during the week.
- Golden, CO, Apex Trail: 2.3 miles, biking is one-way on odd numbered days


Decision-making Filters - Summary


- Can shared use occur in manner that does not impact park resources?
- Can shared use occur without impacting others' experience?
- Can shared use occur safely?

2014 Centennial Cone Park Alternating Use Schedule

Share and Care for Your Parks

Equestrian use is allowed **every day**.
On **weekdays**, trails are multi-use.
On **weekends**, trail use alternates between hikers and bikers.

 **Mountain Bikers**
(Even days)

 **Hikers**
(Odd days)

February

Mo	Tu	We	Th	Fr	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

March

Mo	Tu	We	Th	Fr	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

The End



Thank you

